

Cc: wsimon@frontier.net[wsimon@frontier.net]; Richardson, Lisa[lrichard@blm.gov]
To: Wall, Dan[wall.dan@epa.gov]
From: Peter Butler
Sent: Mon 5/18/2015 7:47:51 PM
Subject: Re: Sampling above Howardsville

I don't see it as very helpful. Peter

Sent from my iPhone

On May 18, 2015, at 1:43 PM, Wall, Dan <wall.dan@epa.gov> wrote:

So, can I take this as we don't need to sample the Senator?

From: Peter Butler [<mailto:butlerpeter2@gmail.com>]
Sent: Wednesday, May 13, 2015 5:11 PM
To: wsimon@frontier.net; Wall, Dan; 'Richardson, Lisa'
Subject: RE: FW: Sampling above Howardsville

Dan – The idea behind sampling the Senator was to see if the flows (and Mn load) had changed over time since we identified it as one of the higher manganese loaders in the upper Animas. After updating a spreadsheet comparing data taken last year by Lisa at Howardsville and A68, I doubt we will see anything important at the Senator.

Attached is the updated spreadsheet. Manganese concentrations at Howardsville are well below chronic TVS. The concentrations would have to be three to four times higher to exceed chronic TVS. Almost all the manganese comes in below Howardsville. Thus, I assume almost all of the increase in manganese we've seen over the years at A68 must come in below Howardsville. The Animas at Howardsville appears to meet chronic cadmium TVS which is a bit of a surprise. It does not meet zinc TVS. Scroll over to the right for each metal to see the graphs on the spreadsheet.

The updates to the spreadsheet include USGS's estimates for flows for A68 when it was iced in the winter, River Watch data from the end of 2014, a couple of new columns, and the graphs. One column calculates the added metal load for Cd, Mn, and Zn between the gages. As much as 280 lbs of zinc per day is added in spring. The last column calculates the average concentration of the water inflow that would be needed to add the additional metal between the gages (change in load/change in flow). Don't know if this last column is useful, but it gives perspective.

Peter Butler

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From: wsimon@frontier.net [<mailto:wsimon@frontier.net>]
Sent: Wednesday, May 13, 2015 9:29 AM
To: 'Wall, Dan'; 'Richardson, Lisa'
Cc: 'Peter Butler'
Subject: RE: FW: Sampling above Howardsville

Dan, the surface water doesn't reach the river but given its proximity to the river and steepness of the hillside and scree nature the water likely enters the rivers as GW. Fe is ranked high (9 to 10 mg/l) also. Bill

From: Wall, Dan [<mailto:wall.dan@epa.gov>]
Sent: Wednesday, May 13, 2015 9:17 AM
To: wsimon@frontier.net; 'Richardson, Lisa'
Cc: 'Peter Butler'
Subject: RE: FW: Sampling above Howardsville

Peter

Would the potential effects of this mine on Mn loading be better addressed through an evaluation of groundwater as opposed to sampling the adit-which doesn't look like it gets to the River? Or is the rationale that if the adit is high we should look at GW?

From: wsimon@frontier.net [<mailto:wsimon@frontier.net>]
Sent: Wednesday, May 13, 2015 9:10 AM

To: Wall, Dan; 'Richardson, Lisa'
Cc: 'Peter Butler'
Subject: RE: FW: Sampling above Howardsville

You have the thumbtack slightly above the mine. It shows as a white streak of mine dump below t ack and slightly to the left looking at the picture. Obvious on the ground when you're in Eureka.

Bill

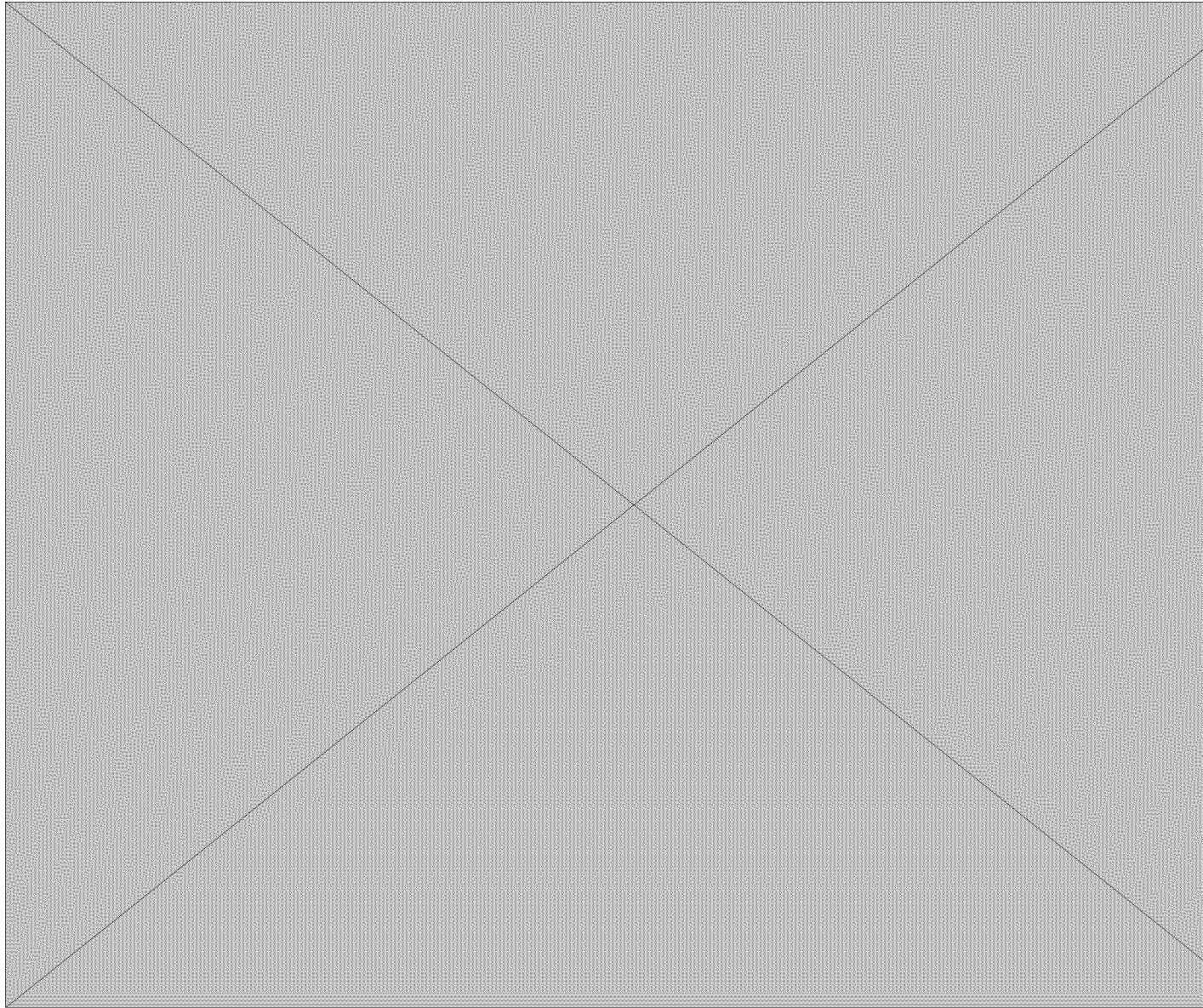
From: Wall, Dan [<mailto:wall.dan@epa.gov>]
Sent: Tuesday, May 12, 2015 2:18 PM
To: Richardson, Lisa
Cc: Peter Butler; wsimon@frontier.net
Subject: RE: FW: Sampling above Howardsville

Well that makes It difficult to sample. These are the coordinates I have and a screen shot of where it plots. Next to Eureka Mill.?

37.8818826

-107.568038

Bill do you know where the Senator Mine is?



From: Richardson, Lisa [<mailto:lrichard@blm.gov>]
Sent: Tuesday, May 12, 2015 1:34 PM
To: Wall, Dan
Cc: Peter Butler
Subject: Re: FW: Sampling above Howardsville

Hi Dan,

Unfortunately, it sounds like neither Peter nor myself know exactly which adit is the Senator but Bill Simon does. Probably need to ask him. I'd like to know to!

Lisa

On Tue, May 12, 2015 at 12:44 PM, Wall, Dan <wall.dan@epa.gov> wrote:

I have the senator mapped on the hillside next to the Sunnyside mill in Eureka. Does the adit even reach the Animas?

From: Richardson, Lisa [mailto:lrichard@blm.gov]
Sent: Friday, May 08, 2015 7:41 AM
To: Wall, Dan; Peter Butler
Subject: Re: FW: Sampling above Howardsville

Good morning. I think Peter has a good point with Senator and Ransom. And I don't know the Senator's ownership either. In fact, I'm not exactly sure which adit is the Senator. Peter, could send a google earth pic of the Senator?

Thank you. Have been meaning to ask that for ages and keep forgetting.

Lisa

On Fri, May 8, 2015 at 7:11 AM, Wall, Dan <wall.dan@epa.gov> wrote:

FYI

From: Peter Butler [mailto:butlerpeter2@gmail.com]
Sent: Thursday, May 07, 2015 6:00 PM

To: Wall, Dan

Subject: Sampling above Howardsville

Dan – I hope the graph below comes thru well. If not, I can send it in an Excel file.

The actual standard is equal to table value standards except in March and April where higher than TVS numbers for aquatic life apply. As you can see, before 1996, manganese levels were not really of concern. Since then, they have climbed dramatically, and we don't know why. I'm not sure manganese was identified as a metal of concern in the BERA, but it probably should be.

The bulkhead creating the Sunnyside mine pool was installed in mid-1996, so possibly the hydrology has changed, driving manganese in groundwater towards the Animas watershed. The Sunnyside mine is loaded with manganese.

Or when Sunnyside Gold disturbed mine tailings from the Sunnyside mine during remediation projects, maybe that triggered a spike, although by now I would expect the spike to be dropping. Sunnyside removed about 112,000 cubic yards in Eureka in 1996-97. Then removed tailings by the Animas near the power plant in 2003.

The one mine we identified as a high manganese loader is the Senator. That's why we'd like to see it sampled for manganese loading to see if it's changed since the mid-1990's. In addition, Sunnyside put a bulkhead in the Ransom adit which is nearby in 1997. Don't know if they are hydrologically connected. We're not sure if the Senator is on BLM land or private (like to know that too).

<image001.png>

Peter Butler

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Lisa Richardson

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